

APPENDIX OF PENDING CLAIMS

32. (Twice Amended) A transgenic monocot plant wherein at least a part of said plant comprises a recombinant nucleic acid comprising a promoter active in said part operably linked to a nucleic acid encoding a thioredoxin h polypeptide wherein said promoter is a seed or grain maturation-specific promoter and said thioredoxin h polypeptide is selected from the group consisting of barley, rice, *Arabidopsis*, soybean, wheat, tobacco and Brassica thioredoxins.

33. The transgenic plant of claim 32 wherein said part is a seed.

34. The transgenic plant of claim 32 wherein said part is a grain.

36. The transgenic plant of claim 32 wherein said promoter selected from the group consisting of rice glutelins, rice oryzins, rice prolamines, barley hordeins, wheat gliadins, wheat glutenins, maize zeins, maize glutelins, oat glutelins, sorghum kafirins, millet pennisetins, rye secilins, and maize embryo-specific globulin promoters.

37. The transgenic plant of claim 36 wherein said barley hordein promoter is selected from the group consisting of B-1 hordein and D-hordein promoters.

38. The transgenic plant of claim 32 wherein said monocot plant is selected from the group consisting of rice, barley, maize, wheat, oat, rye, sorghum, millet, triticale, turfgrass and forage grass.

40. (Twice Amended) The transgenic plant of claim 32 wherein said thioredoxin h is selected from the group consisting of barley, wheat and rice thioredoxin h.

41. (Amended) The transgenic plant of claim 32 wherein said recombinant nucleic acid further comprises a nucleic acid encoding a signal peptide operably linked to said promoter and said nucleic acid molecule encoding a thioredoxin h protein.

42. (Amended) The transgenic plant of claim 41 wherein said signal peptide targets expression of the thioredoxin h polypeptide to an intracellular body.

43. The transgenic plant of claim 42 wherein said signal peptide is selected from the group consisting of B-1 hordein and D-hordein signal peptides.

77. (Amended Twice) A transgenic monocot seed or grain comprising a recombinant nucleic acid comprising a promoter active in said seed or grain operably linked to a nucleic acid molecule encoding a barley, rice, *Arabidopsis*, soybean, wheat, tobacco, or Brassica thioredoxin h polypeptide wherein said promoter is a seed or grain maturation-specific promoter.

79. The transgenic seed or grain of claim 77 wherein said promoter is selected from the group consisting of rice glutelins, rice oryzins, rice prolamines, barley hordeins, wheat gliadins, wheat glutenins, maize zeins, maize glutelins, oat glutelins, sorghum kafirins, millet pennisetins, rye secalins, and maize embryo-specific globulin promoters.

80. The transgenic seed or grain of claim 77 wherein said barley hordein promoter is selected from the group consisting of B-1 hordein and D-hordein promoters.

81. The transgenic seed or grain of claim 77 wherein said seed or grain is selected from the group consisting of rice, barley, maize, wheat, oat, rye, sorghum, millet, and triticales seed or grain.

83. (Twice Amended) The transgenic seed or grain of claim 77 wherein said thioredoxin h is selected from the group consisting of barley, wheat, and rice thioredoxin h.

84. (Amended) The transgenic seed or grain of claim 77 wherein said recombinant nucleic acid further comprises a nucleic acid encoding a signal peptide operably linked to said promoter and said nucleic acid molecule encoding a thioredoxin h protein.

85. (Amended) The transgenic seed or grain of claim 84 wherein said signal peptide targets expression of the thioredoxin h polypeptide to an intracellular body.

86. The transgenic seed or grain of claim 85 wherein said signal peptide is selected for the group consisting of B-1 hordein and D-hordein signal peptides.

112. The transgenic plant of claim 38 wherein said plant is rice.

113. The transgenic plant of claim 112 wherein said thioredoxin h is rice thioredoxin h.

114. The transgenic plant of claim 38 wherein said plant is barley.

115. The transgenic plant of claim 114 wherein said thioredoxin h is barley thioredoxin h.

116. The transgenic plant of claim 38 wherein said plant is maize.

118. The transgenic plant of claim 38 wherein said plant is wheat.

119. The transgenic plant of claim 118 wherein said thioredoxin is wheat thioredoxin h.

120. The transgenic plant of claim 38 wherein said plant is oat.

122. The transgenic plant of claim 38 wherein said plant is rye.

124. The transgenic plant of claim 38 wherein said plant is sorghum.

126. The transgenic plant of claim 38 wherein said plant is millet.

128. The transgenic plant of claim 38 wherein said plant is triticales.

130. The transgenic plant of claim 38 wherein said plant is forage or turfgrass.
132. The transgenic seed or grain of claim 81 wherein said seed or grain is rice.
133. The transgenic seed or grain of claim 132 wherein said thioredoxin is rice thioredoxin *h*.
134. The transgenic seed or grain of claim 81 wherein said seed or grain is barley.
135. The transgenic seed or grain of claim 134 wherein said thioredoxin is barley thioredoxin *h*.
136. The transgenic seed or grain of claim 81 wherein said seed or grain is maize.
138. The transgenic seed or grain of claim 81 wherein said seed or grain is wheat.
139. The transgenic seed or grain of claim 138 wherein said thioredoxin is wheat thioredoxin *h*.
140. The transgenic seed or grain of claim 81 wherein said seed or grain is oat.
142. The transgenic seed or grain of claim 81 wherein said seed or grain is rye.
144. The transgenic seed or grain of claim 81 wherein said seed or grain is sorghum.
146. The transgenic seed or grain of claim 81 wherein said seed or grain is millet.
148. The transgenic seed or grain of claim 81 wherein said seed or grain is triticale.

150. The transgenic plant of claim 32 wherein said thioredoxin is *Arabidopsis* thioredoxin *h*.

151. The transgenic plant of claim 32 wherein said thioredoxin is soybean thioredoxin *h*.

152. (Amended) The transgenic monocot seed or grain of claim 77 wherein said thioredoxin is *Arabidopsis* thioredoxin *h*.

153. (Amended) The transgenic monocot seed or grain of claim 77 wherein said thioredoxin is soybean thioredoxin *h*.

154. The transgenic plant of claim 32 wherein said thioredoxin is tobacco thioredoxin *h*.

155. The transgenic plant of claim 32 wherein said thioredoxin is *Brassica* thioredoxin *h*.

156. (Amended) The transgenic monocot seed or grain of claim 77 wherein said thioredoxin is tobacco thioredoxin *h*.

157. (Amended) The transgenic monocot seed or grain of claim 77 wherein said thioredoxin is brassica thioredoxin *h*.